

Polymers Advance Heat Management Materials for Vehicles



Marshall Space Flight Center

***StarFire Systems Inc.
Schenectady, NY***

NASA Technology

- ◆ On Space Shuttle missions following the Columbia accident, a powerful sealant was to be made available on all flights to repair external spacecraft damage.
- ◆ Especially important was that the sealant be resistant to extreme heat.

Technology Transfer

- ◆ With NASA funding, StarFire Systems Inc. demonstrated and tested the SMP-10, a polymer that would convert to ceramic when exposed to temperatures above 1500°F.
- ◆ The ceramic held up to burning temperatures present during re-entry into the earth's atmosphere.



Benefits

- ◆ StarFire now has an offshoot line of extreme-heat-resistant polymers called StarPCS, used in the military, aviation, and automotive markets.
- ◆ The product is being tested for use in Formula 1 race cars, both as a heat shield to protect drivers from engine components and as part of a new exhaust system meant to increase horsepower.